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STAMP DUTIES.

ON BONDS.

Stamp.

Any bond, conditioned. for the payment of any Sum not exceeding £92. 6s. 1¾d. - £0 10 0

Exceeding				And not exceeding			Stamp.		
£92	6	1¾	-	£184	12	3¾	1	0	0
184	12	3¾	-	276	18	5½	1	10	0
276	18	5½	-	461	10	9¼	2	0	0
461	10	9¼	-	923	1	6½	2	10	0
923	1	6½	-	1,846	3	1	3	10	0
1,846	3	1	-	2,769	4	7½	4	0	0
2,769	4	7½	-	3,692	6	1¾	4	10	0
3,692	6	1¾	-	4,615	7	8¼	6	0	0
4,615	7	8¼	-	-	-	-	10	0	0

BILLS OF EXCHANGE AND PROMISSORY NOTES.

Not exceeding									
£9	4	7½	-	-	-	-	0	0	6
Exceeding				**And not exceeding**					
9	4	7½	-	27	13	10¼	0	1	6
27	13	10¼	-	46	3	1	0	2	0
46	3	1	-	92	6	1¾	0	3	0
92	6	1¾	-	184	12	3¾	0	4	0
184	12	3¾	-	461	10	9¼	0	5	0
461	10	9¼	-	923	1	6½	0	8	0
923	1	6½	-	2,769	4	7½	0	15	0
2,769	4	7½	and upwards			-	1	5	0

RECEIPTS,

Amounting to				And not amounting to					
5	0	0		9	4	7½	0	0	2
9	4	7½	-	18	9	2¾	0	0	4
18	9	2¾	-	46	3	1	0	0	8
46	3	1	-	92	6	1¾	0	1	0
92	6	1¾	-	184	12	3¾	0	2	0
184	12	3¾	-	461	10	9¼	0	3	0
461	10	9¼	and upwards			-	0	5	0
A Receipt in full of all demands			-	-	-		0	5	0

TERMS FOR THE YEAR 1835.

Hilary Term,	Begins	Mon. Jan. 12,	Ends	Sat. Jan. 31
Easter Term	——	Wed. April 15,	——	Wed. May 13
Trinity Term'	——	Wed. May 27,	——	Wed. June 17
Michaelm. Term,	——	Mon. Nov. 2,	——	Wed. Nov. 25

CITY of DUBLIN QUARTER SESSIONS for 1835.

City of Dublin Quarter Sessions, Tuesday, 13 January, Tuesday, 28 April, Tuesday, 14 July, Tuesday, 6 October.

CUSTOM-HOUSE HOLIDAYS, 1835.

24th February, 17th April, 28th May, and 25th December.

HOLIDAYS KEPT AT THE STAMP-OFFICE.

17th April, 28th and 29th May, 13th Aug. 8th Sept. 25th Dec.

REIGNING SOVEREIGNS OF EUROPE.

Kingdoms.	Sovereigns.	When born.	Accession.
England	William IV............	Aug. 21, 1765	1830
France	Louis Philippe I........	Oct. 6, 1773	1830
Russia	Nicholas I..............	July 6, 1796	1825
Spain	Maria Isabella..........	Oct. 10, 1830	1833
Portugal	Donna Maria II.	April 4, 1819	1826
Prussia	Frederick William III..	Aug. 3, 1770	1797
Holland...........	William I..............	Aug. 24, 1772	1815
Belgium...........	Leopold I..............	Dec. 16, 1790	1831
Denmark	Frederick VI.	Jan. 28, 1768	1808
Sweden and Norway	Charles (John) XIV....	Jan. 26, 1764	1818
Austria	Francis II.............	Feb. 12, 1768	1792
Popedom	Gregory XVI...........	Sept. 18, 1763	1831
Sardinia...........	Charles Amadeus	Aug. 16, 1800	1831
Naples and Sicily ..	Ferdinand II.	Jan. 12, 1810	1830
Turkey	Mahmoud II.	July 20, 1785	1808
Hanover	William IV. of England	*Viceroy*, Duke of Cambridge	

SHORTEST METHOD OF CALCULATING INTEREST AT FIVE PER CENT.

Multiply the number of days by the pounds of the principal sum; then divide the product by 365. The quotient will be the amount in shillings: the fractional remainder, if any, will give an idea as to the pence sufficiently near for all practical purposes. If the amount of interest at any other rate is required, calculate as above, and take the proportion of the result; for instance, deduct one-fifth, and you have the amount at the rate of four per cent.

ECLIPSES OF THE SUN AND MOON AND TRANSIT OF MERCURY, IN 1835.

In the year 1835 there will be two Eclipses of the Sun, one of the Moon, and a Transit of Mercury. The only one of these visible at Dublin will be the Eclipse of the Moon on June 10.

May 27.—Annular Eclipse of the Sun, invisible at Dublin. This eclipse will be visible more or less to the inhabitants of Africa and South America, and the Southern parts of Europe.

At the Cape of Good Hope this Eclipse—

Begins	3h.	49m.	36 s.	Mean time at the Cape.
Ends..........	4h.	4m.	7 s.	

Magnitude of the Eclipse=0.003 (assuming the diameter of the Sun 1, or unity) on the Northern limb.

June 10 *and* 11.—Partial Eclipse of the Moon, visible at Dublin:

First contact with dark shadow ..	9 h.	42 m.	aftern.
Middle of the eclipse............	10 h.	10 m.	aftern.
Last contact with dark shadow .	10 h.	39 m.	aftern.

Magnitude of the Eclipse=0.07 (assuming the diameter of the Moon 1, or unity) on the Northern limb.

At 8 h. 51m., just 44 minutes after the first contact with the penumbra, the Star θ Ophiuchi will be occulted (or disappear) behind the Moon, and will reappear at 9h. 57m. about fifteen minutes after the first contact with the dark shadow.

Nov. 7.—Transit of Mercury over the Sun's disk. This interesting phenomenon will occur after sun-set in this country.

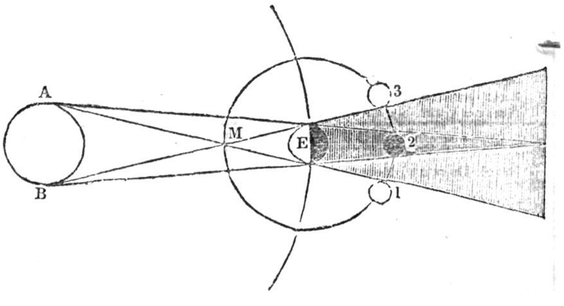
Nov. 20.—Total eclipse of the Sun, invisible at Dublin. This eclipse will be visible in the southern parts of Asia and Europe, the whole of Africa, except Egypt, and the north-eastern part of South America. A very small portion of the Sun's disk may probably appear eclipsed between nine and ten o'clock, A. M. in the South of Ireland, Devonshire, Cornwall, and Pembrokeshire. The line on which the eclipse will appear total, crosses Madagascar and Africa obliquely in the direction of Sierra Leone.

At the Cape of Good Hope this Eclipse—

Begins	11 h.	10 m.	12 s.	Mean time at the Cape.
Ends	1 h.	8 m.	0 s.	

Magnitude of the Eclipse=0.30 (asuming the diameter of the sun 1. or unity) on the Northern limb.

From the Christian Almanack, elegantly printed, and containing much useful information, we copy the following Diagram or figure, explanatory of the nature of eclipses, with the annexed observations:



Let A B represent the Sun, E the earth; and the circles 1 2 3 the Moon at three different portions of her orbit or path round the earth. The lines drawn from the Sun represent the direction of the rays of light which illuminates one half of the earth, and forms both the dark shadow and penumbra.

Shadows formed by opaque bodies are the consequence of the rays of light moving in straight lines. As the globe we inhabit is opaque, it casts a shadow. The form of any shadow depends upon that of the body which casts it, together with the magnitude of the source of light. Now the earth being a globe and the diameter of the Sun being so much larger than that of the earth (about 110 times,) the form of the shadow cast by the earth must necessarily be a cone, as is represented by the dark shadow in our engraving; and as a further consequence of the greater diameter of the Sun, the lighter shade (called the penumbra) will also be cast.

When the Moon in her course round the earth arrives at No. 2, it is then in opposition to the Sun, and is called *Full Moon,* and if at the same time its position be such, that a line passing through the Sun and the earth would pass through the Moon also, then a lunar eclipse must take place; that is, the Moon must pass through the earth's shadow. This might be expected to take place once a month, that is once in each journey of the Moon round the earth; but as the Moon's orbit or path is oblique, or inclined to the ecliptic, in which the Sun always appears, the Moon, when full, will sometimes pass above the shadow, and sometimes below it; at other times only a small portion of the Moon will enter the shadow, in which case a partial Eclipse takes place, as the one described above for June 10th.

In a lunar Eclipse, when the Moon arrives at the point marked No. 1, it is called the first contact with the penumbra; at No. 2, the middle of the Eclipse, it is then invisible, or if visible, of a deep copper colour; and at No. 3, the last contact with the penumbra.

A solar Eclipse can only happen at new Moon being at that part of her orbit which is next the Sun, as at M; it is then said to be *new,* or in conjunction with the sun. The Moon being also an opaque body, its dark side will then be turned towards the earth, and the shadow which it casts will pass over part of the earth, or in other words, part of the earth will pass through the Moon's shadow; therefore, to a spectator on the Moon the earth will be partially eclipsed, and to a spectator on the earth the Sun will be eclipsed. This phenomenon would also occur every new Moon, but for the obliquity of the Moon's orbit before spoken of.

ON THE APPEARANCE AND MOTIONS OF COMETS.

None of the celestial bodies have given rise to more speculation and conjecture than Comets. Their strange appearance has in all ages been a matter of terror to the vulgar, who uniformly have looked upon them as bad omens, and forerunners of war, pestilence, &c. Others, less superstitious, supposed them to be meteors raised in the higher regions of the air.

Aristotle conceived them to be meteoric bodies; Kepler huge animals, that swam round the sun like fishes; and Bodin imagined that they are spirits, which, having long dwelt on the earth, are about to be translated to the skies. Kepler discovered, from his own observations and those of his master, Tycho, that the comets did not, as had been supposed, move in straight lines, but in paths concave towards the sun, and he conceived that their orbits were parabolas.

The tails of comets have given rise to various conjectures; but though it is apparent that they are in some way connected with the sun, we know as yet absolutely nothing of either their cause, or their uses.

Mr. Whiston has conjectured that the deluge, of which, in the sacred writings, we have the only authentic record, but of which the annals of most nations have traditionary accounts, was produced by the near approach of a comet, whose atmosphere had been attracted by the earth; and he further surmises, that the final catastrophe foretold in the Scriptures may be produced by the approach of a comet prodigiously heated in its perihelion. We pretend not, however, on such subjects as these, to penetrate the secrets of Almighty wisdom, which can produce its own ends, by means of which we have no conception.

Much attention is at present paid to this branch of astronomy: and the consequence has been, that a visit of a comet to our regions is found to be an event of very frequent occurrence. In the year 1825 not less than five different comets were observed.

In seeking for information on this interesting subject, we turned to the report of the proceedings at the recent great meeting of the British Association in Edinburgh, in the hope that some new or important point had been discussed by the '*cognoscenti*' on the occasion. The following, however, was the only paragraph which we could discover, bearing any relation to the subject: we copy it from the *Literary Gazette, Sept. 13.*

"At the Assembly Room, after the chairmen of the sections had delivered their reports, Dr. Hamilton delivered a discourse on Comets, particularly Halley's and Encke's, which was well adapted to a mixed auditory, though rather too long. He was followed by Mr. Whewell, on the same subject, who blended astronomy and humour so curiously together, that we hardly knew whether he was in earnest or jest—only that we never met with jokes illustrated by diagrams.

"The theory of Comets has yet to be discovered; but these vague philosophical sports are quite right for an evening meeting of ladies and gentlemen."

The following particulars appear to contain all that is yet known as to the form or movements of these eccentric heavenly messengers.

Fig. 3.

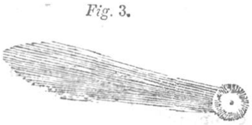


Fig. 4.

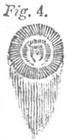


Fig. 1.

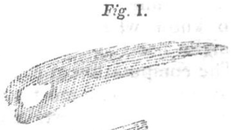


Fig. 2.

Comets viewed through a telescope have a very different appearance from any of the planets. The nucleus, or star, seems much dimmer. They are to appearance surrounded with atmospheres of a prodigious size, often rising ten times higher than the nucleus, and have often likewise different phases, like the moon.

The head of a comet, seen through a good telescope, appears to consist of a solid globe, and an atmosphere, that surrounds it. The solid part is frequently called the nucleus; which, through a telescope, is easily distinguished from the atmosphere or hairy appearance.

A comet is generally attended with a blaze or tail, whereby it is distinguished from a star or planet; as it is also by its motion. Sometimes the tail only of a comet has been visible at a place where the head has been all the while under the horizon; such an appearance is called a beam. Whether the tail of a comet is caused or not by the heat of the sun, it is always observed to grow larger as it approaches, and to diminish as it recedes from that luminary.

The tails of comets often appear bent. (fig. 1 and 2.) This is probably owing to the resistance of the æther: which, though extremely small, may have a sensible effect on so thin a vapour as the tail consists of. This bending is seen only when the earth is not in the plane of the orbit of the comet continued. When that plane passes through the eye of the spectator, the tail appears straight, (fig. 3): if the eye be a little out of the line, the tail will appear short, (fig. 4.)

From observations made on the great comet of 1680, Sir Isaac Newton found that these bodies, like the planets, move round the sun in elliptical orbits. This comet was seen for twenty-one days in its passage towards the sun, and for nearly three months as it receded from that luminary. The most careful observations were made to determine its place, and the conclusions deduced from these observations are confirmed by observations made on all that have been well observed since.

There is now no question among astronomers, that comets are opaque bodies enlightened by the sun. Their perihelion distances from the sun are exceedingly various, some being not more than one-fifth, and others upwards of four times the mean distance of the earth. Their diameters, too, differ very greatly. Their apparent diameters of course vary with their distance; and some have supposed that those apparently preternatural darknesses, of which several are recorded in history, may have been caused by the interposition of a comet between the earth and the sun, at a time when, from its proximity to the earth, its apparent diameter was greater than the sun's, and when its apparent motion was in the same direction as the sun's. The diameter of the comet of 1744, when at the distance of the sun from us, was about one minute, hence its real diameter was about three times that of the earth. The diameter of their atmosphere is however often ten or fifteen times as great as that of the nucleous.